

- 1        1. A method comprising:
  - 2              applying stress to an optical medium to provide a
  - 3              desired dispersion compensation.
- 1        2. The method of claim 1 including applying stress  
2        to an optical medium including a photoelastic medium to  
3        generate a corrective dispersion of the opposite polarity  
4        of a dispersion induced in the optical medium.
- 1        3. The method of claim 2 including using a  
2        piezoelectric device to generate stress in an optical  
3        medium.
- 1        4. The method of claim 3 including controlling the  
2        amount of stress and thereby the desired dispersion  
3        compensation by controlling the voltage applied to said  
4        piezoelectric device.
- 1        5. The method of claim 4 including securing the  
2        photoelastic medium to said piezoelectric device and  
3        passing an optical signal through said photoelastic medium.

1       6. A method comprising:  
2           securing a photoelastic medium to a piezoelectric  
3 device; and  
4           applying a voltage to the piezoelectric device to  
5 induce a stress in said photoelastic medium appropriate to  
6 correct dispersion generated in an optical system coupled  
7 to said photoelastic medium.

1       7. The method of claim 6 including controlling the  
2 voltage applied to said piezoelectric device to generate a  
3 dispersion of a polarity opposite to the polarity of a  
4 dispersion generated in said optical system.

1       8. The method of claim 7 including generating a  
2 corrective dispersion of substantially the same magnitude  
3 as the dispersion generated in said optical system.

1       9. An optical system comprising:  
2           an optical medium defining an optical path;  
3           a photoelastic material in said optical path; and  
4           a device to controllably stress said photoelastic  
5 medium to generate a dispersion of an appropriate polarity  
6 and magnitude to correct a dispersion induced in said  
7 optical medium.

1       10. The system of claim 9 wherein said device is a  
2 piezoelectric actuator.

1       11. The system of claim 10 including a voltage source  
2 to control the amount of voltage applied to said  
3 piezoelectric actuator to enable tuning of the dispersion  
4 applied through said photoelastic medium.

1       12. An optical system comprising:  
2           an optical medium defining an optical path;  
3           a photoelastic material in said optical path; and  
4           a piezoelectric actuator coupled to said  
5 photoelastic material.

1       13. The system of claim 12 wherein said piezoelectric  
2 actuator is secured to said photoelastic medium.

1       14. The system of claim 13 including a voltage source  
2 to controllably apply potential to said piezoelectric  
3 actuator.

1       15. The system of claim 14 to provide a tunable  
2 magnitude and polarity of dispersion to cancel dispersion  
3 generated along said optical path by said optical medium.